

Claims 1-13 (withdrawn)

Claim 14 (currently amended): A method of determining the presence and extent of axonal damage in the head of a patient suspected of having ~~traumatic head injury~~ suffered a neurologic trauma selected from acute cerebral vascular accident, primary neuronal injuries, primary hemorrhages, primary vascular injuries or secondary traumatic lesions, said method comprising the steps:

- (a) obtaining a sample of cerebrospinal fluid from said patient;
- (b) treating said sample of cerebrospinal fluid with at least one monoclonal antibody, said at least one monoclonal antibody having been raised against an axonally-derived tau protein of SEQ ID NO:1;
- (c) detecting the presence of said axonally-derived tau protein bound to said at least one monoclonal antibody; and
- (d) comparing the amount of said axonally-derived tau protein bound to said at least one monoclonal antibody in step (c) to control samples from the group representing a normal undamaged axon state and those representing an axonal damage state.

Claims 15-16 (canceled)

Claim 17 (previously amended): A method according to Claim 14 wherein said axonally-derived tau protein is a fragment of said tau protein of SEQ ID NO:1 demonstrating an apparent molecular weight in the range of 30 kDa to 50 kDa.

Claim 18 (canceled)

Claim 19 (previously amended): A method according to Claim 17 wherein said axonally-derived protein comprises the sequence from serine¹⁹⁹ to serine³⁹⁶ of tau protein of SEQ ID NO: 1.

Claim 20 (canceled)

Claims 21-22 (withdrawn)

Claim 23 (original): A method according to claim 14 wherein said presence of said axonally-derived protein bound to said at least one monoclonal antibody is detected through gel electrophoresis.

Claim 24 (previously amended): A method according to Claim 23 wherein said axonally-derived tau protein bound to said at least one monoclonal antibody is a fragment of tau protein SEQ ID NO:1 which is detected through gel electrophoresis and which gives rise to an electrophoresis gel demonstrating multiple protein bands with apparent molecular weights from 30 kDa to 50 kDa.

Claim 25 (canceled)

Claim 26 (original): A method according to claim 14 further comprising the measurement of said axonally derived proteins in said cerebrospinal fluid by an ELISA technique.

Claim 27 (previously amended): The method of Claim 26 wherein the ELISA employs monoclonal antibodies recognizing tau protein of SEQ ID NO: 1 present in human cerebrospinal fluid.

Claim 28 (canceled)

Claim 29 (original): The method of claim 26 wherein said ELISA is a tau sandwich ELISA.

Claims 30-31 (canceled)

Claim 32 (currently amended): A method of determining the presence and extent of axonal damage in the head of a patient suspected of having a an acute cerebrovascular accident, said method comprising the steps of:

- (e) obtaining a sample of cerebrospinal fluid from said patient;
- (f) treating said sample of cerebrospinal fluid with at least one monoclonal antibody, said at least one monoclonal antibody having been raised against an axonally-derived tau protein of SEQ ID NO:1;
- (g) detecting the presence of said axonally-derived tau protein bound to said at least one monoclonal antibody; and

comparing the amount of said axonally-derived tau protein bound to said at least one monoclonal antibody in step (c) to control samples from the group representing a normal undamaged axon state and those representing an axonal damage state.

Claim 33 (currently amended): The method according to claim 14 wherein the ~~traumatic head injury~~ neurologic trauma is selected from ~~primary hemorrhages, primary vascular injuries, traumatic lesions, and acute cerebral vascular accident~~ primary neuronal injuries and secondary traumatic lesions.